CLAIMS

I/We Claim:

1. An integrated transient voltage surge suppression system and automatic power transfer switch, comprising:

a framework;

an automatic transfer switch mounted to the framework, the automatic transfer switch being configured for electrical connection to a primary source of electrical power, a secondary source of electrical power, and a recipient electrical power load;

the automatic transfer switch being configured to normally route primary electrical power from the primary source of electrical power to the recipient electrical power load;

the automatic transfer switch being further configured to switch upon the occurrence of a predetermined switch condition such that the automatic power switch alternately routes secondary electrical power from the secondary source of electrical power to the recipient power load; and

a transient voltage surge suppression device mounted to the framework and electrically positioned between the automatic transfer switch and the recipient electrical power load.

2. An integrated transient voltage surge suppression system and automatic power transfer switch as recited in claim 1, and further comprising a power load distribution center mounted to the framework and electrically positioned

between the transient voltage surge suppression device and the recipient electrical power load.

3. An integrated transient voltage surge suppression system and automatic power transfer switch as recited in claim 1, and further wherein the primary source of electrical power is from power distribution lines.

4. An integrated transient voltage surge suppression system and automatic power transfer switch as recited in claim 1, and further wherein the secondary source of electrical power is from an electrical generator.

5. An integrated transient voltage surge suppression system and automatic power transfer switch as recited in claim 1, and further wherein the automatic transfer switch is electrically connected to the primary source of electrical power via a primary phase conductor and a primary neutral conductor.

6. An integrated transient voltage surge suppression system and automatic power transfer switch as recited in claim 1, and further wherein the automatic transfer switch is electrically connected to the secondary source of electrical power via a secondary phase conductor and a secondary neutral conductor.

7. An integrated transient voltage surge suppression system and automatic power transfer switch as recited in claim 1, and further wherein the automatic transfer switch is configured to automatically switch back to again route electrical power from the primary source of electrical power to the recipient electrical power load upon the occurrence of a switch-back predetermined condition.

8. An integrated transient voltage surge suppression system and automatic power transfer switch as recited in claim 7, and further wherein the switch-back predetermined condition is the electrical power voltage rising above a predetermined voltage.

9. An integrated transient voltage surge suppression system and automatic power transfer switch as recited in claim 7, and further wherein the switch-back predetermined condition is the electrical power frequency rising above a predetermined frequency.

10. An integrated transient voltage surge suppression system and automatic power transfer switch as recited in claim 1, and further wherein the automatic transfer switch is configured to switch back the recipient electrical power load to the primary source of electrical power upon the occurrence of a predetermined switch-back condition.

11. An integrated transient voltage surge suppression system and automatic power transfer switching means, comprising:

a housing means;

an automatic transfer switching means mounted to the housing means, the automatic transfer switching means being configured for electrical connection to a primary source of electrical power, a secondary source of electrical power, and a recipient electrical power load;

the automatic transfer switching means being configured to normally route primary electrical power from the primary source of electrical power to the recipient electrical power load;

the automatic transfer switching means being further configured to switch upon the occurrence of a predetermined switch condition such that the automatic power switch alternately routes secondary electrical power from the secondary source of electrical power to the recipient power load; and

a transient voltage surge suppression means mounted to the framework and electrically positioned between the automatic transfer switching means and the recipient electrical power load.

12. An integrated transient voltage surge suppression system and automatic power transfer switching means as recited in claim 11, and further comprising a power load distribution center mounted to the

framework and electrically positioned between the transient voltage surge suppression device and the recipient electrical power load.

13. An integrated transient voltage surge suppression system and automatic power transfer switching means as recited in claim 11, and further wherein the primary source of electrical power is from power distribution lines.

14. An integrated transient voltage surge suppression system and automatic power transfer switching means as recited in claim 11, and further wherein the secondary source of electrical power is from an electrical generator.

15. An integrated transient voltage surge suppression system and automatic power transfer switching means as recited in claim 11, and further wherein the automatic transfer switch is electrically connected to the primary source of electrical power via a primary phase conductor and a primary neutral conductor.

16. An integrated transient voltage surge suppression system and automatic power transfer switching means as recited in claim 11, and further wherein the automatic transfer switch is electrically connected to the

secondary source of electrical power via a secondary phase conductor and a secondary neutral conductor.

17. An integrated transient voltage surge suppression system and automatic power transfer switching means as recited in claim 11, and further wherein the automatic transfer switch is configured to automatically switch back to again route electrical power from the primary source of electrical power to the recipient electrical power load upon the occurrence of a switch-back predetermined condition.

18. An integrated transient voltage surge suppression system and automatic power transfer switching means as recited in claim 17, and further wherein the switch-back predetermined condition is the electrical power voltage rising above a predetermined voltage.

19. An integrated transient voltage surge suppression system and automatic power transfer switching means as recited in claim 17, and further wherein the switch-back predetermined condition is the electrical power frequency rising above a predetermined frequency.

20. An integrated transient voltage surge suppression system and automatic power transfer switching means as recited in claim 11, and further wherein the automatic transfer switch is configured to switch back

the recipient electrical power load to the primary source of electrical power upon the occurrence of a predetermined switch-back condition.

21. An integrated transient voltage surge suppression system, automatic power transfer switch and power distribution panel, comprising:

a power distribution panel framework;

an automatic transfer switch mounted in the power distribution panel framework, the automatic transfer switch being configured for electrical connection to a primary source of electrical power, a secondary source of electrical power, and a recipient electrical power load;

the automatic transfer switch being configured to normally route primary electrical power from the primary source of electrical power to the recipient electrical power load;

the automatic transfer switch being further configured to switch upon the occurrence of a predetermined switch condition such that the automatic power switch alternately routes secondary electrical power from the secondary source of electrical power to the recipient power load;

a transient voltage surge suppression device mounted in the power distribution panel framework and electrically positioned between the automatic transfer switch and the recipient electrical power load; and

a position load center mounted in the power distribution panel framework and electrically positioned between the transient voltage surge suppression device and the recipient electrical power load.

22. An integrated transient voltage surge suppression system, automatic power transfer switch and power distribution panel as recited in claim 21, and further wherein the primary source of electrical power is from power distribution lines.

23. An integrated transient voltage surge suppression system, automatic power transfer switch and power distribution panel as recited in claim 21, and further wherein the secondary source of electrical power is from an electrical generator.

24. An integrated transient voltage surge suppression system, automatic power transfer switch and power distribution panel as recited in claim 21, and further wherein the automatic transfer switch is configured to automatically switch back to again route electrical power from the primary source of electrical power to the recipient electrical power load upon the occurrence of a switch-back predetermined condition.

25. An integrated transient voltage surge suppression system, automatic power transfer switch and power distribution panel as recited in claim 21,

and further wherein the switch-back predetermined condition is the electrical power voltage rising above a predetermined voltage.

26. An integrated transient voltage surge suppression system, automatic power transfer switch and power distribution panel as recited in claim 21, and further wherein the switch-back predetermined condition is the electrical power frequency rising above a predetermined frequency.

27. An integrated transient voltage surge suppression system, automatic power transfer switch and power distribution panel as recited in claim 21, and further wherein the automatic transfer switch is configured to switch back the recipient electrical power load to the primary source of electrical power upon the occurrence of a predetermined switch-back condition.

28. An integrated automatic power transfer switch and power distribution panel, comprising:

a power distribution panel framework;

an automatic transfer switch mounted in the power distribution panel framework, the automatic transfer switch being configured for electrical connection to a primary source of electrical power, a secondary source of electrical power, and a recipient electrical power load;

the automatic transfer switch being configured to normally route primary electrical power from the primary source of electrical power to the recipient electrical power load;

the automatic transfer switch being further configured to switch upon the occurrence of a predetermined switch condition such that the automatic power switch alternately routes secondary electrical power from the secondary source of electrical power to the recipient power load; and

a position load center mounted in the power distribution panel framework and electrically positioned between the automatic transfer switch and the recipient electrical power load.